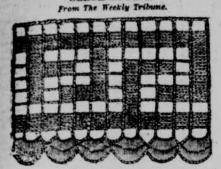
KNITTING AND CROCHET. GREEK EDGING.



B. F. C. sends directions for a pretty crochet insertion and edging worked the short way. Cast on thirty stitches.

1strow: Miss 5, 4 treble, 2 chain, miss 2, 16 treble, en., miss 2, 1 treble in the last stitch, make 4

hain and turn. 2d row: 4 treble (on the first four of the 16 treble of the previous row), 2ch. miss 2, 1 treble, 2 ch., miss 2, 1 treble, 2 ch., miss 2, 1 treble, 2 ch., miss

2, 1 treble. 2 ch., miss 2, 4 treble, 2 ch, 1 treble. nake 4 ch. and turn. 3d row: 16 treble (the first four on the four TC of the 2d row) 2 ch., miss 2, 4 treble, 2 ch., 1 treble,

make 4 ch., and turn. 4th row: 4 treble (on the 4 TC of the 3d row), 2 sh., miss 2, 1 treble, 2 ch., miss 2, 1 treble, 2 ch., miss 2, 4 treble, 2 ch., miss 2, 4 treble, 2 ch., 1

reble, make 4 ch. and turn. 5th row: 4 treble, 2 ch., miss 2, 4 treble, -2 ch., mss 2, 4 treble, 2 ch., miss 2, 4 treble, 2 ch., 1 treble, nake 4 ch. and turn.

6th row: 4 treble, 2 ch., miss 2, 4 treble, 2 chain, niss 2, 1 treble, 2 ch., miss 2, 1 treble, 2 ch., miss 1. 4 treble, 2 ch., 1 treble, make 4 ch, and turn. Repeat from 1st row, beginning that with 4 treble

on the 4 TC of previous row), 2 ch., etc. This pattern, adds B. F. C., forms the Walls of froy, and is not made by going in the stitch, but by isking up the two threads on the top of the stitch. shere you work the treble stitches over the 2 ch. Sc. 40 cotton is very pretty. The directions above nake a crochet insertion. To form an edging, wochet shells on one side of the insertion.

Readers will see that this pattern is really an eximple of open and close square crochet work, with the open squares so arranged as to imitate antique nodels. B. F. C.'s directions do not exactly corespond with the specimen of the work forwarded, and of which we give a cut, but the pattern s so simple that workers will be able to follow the illustration, or to arrange the squares in any order they choose without lifficulty. One suggestion, however, we would like to make. The open squares along the siges of the insertion are rather irregular. Why not make these regular and full-the insertion then sisting of nine complete open and close squares ! To do this, cast on 32 stitches. In the first row miss 7, work as above, and at the end of the row make 5 ch, before turning. The only other modification nake 5 ch. and turn" at the close of each row, nstead of "2 ch., I treble, make 4 ch. and turn."

HANDSOME KNITTING STITCH. This is an openwork pattern, particularly pretty for shawls, curtains and clouds. Cast on any number of stitches divisible by six.

1st row : Knit 1, thread forward, slip 1, knit 1. draw the slipped stitch over the knitted one, knit 1, anit 2 together, thread forward, repeat to end of

3d row: Knit 2, thread forward, slip 1, knit 2 ogether, draw the slipped stitch over, thread forward, knit I, repeat to end of row,

4th row : Purl. 5th row: Knit 1, knit 2 together, over, knit 1. ever, ship 1, knit 1, draw the slipped stitch over, repeat to end of row.

6th row : Purl. 7th row : Knit 2 together, . thread forward, init 3, thread forward, slip 1, knit 2 together, iraw the stipped stitch over, repeat from ", finish

Sth row : Purl. Begin again at 1st row.

BABY'S CRADLE-COVER.

Two long needles, No. 10, and a third short one pointed at both ends, will be necessary for this pat-

tern, with about 112 pounds of white fleecy thread. Cast on 150 stitches, and knit 4 plain rows. 1st row of pattern: * knit 8, knit 2 together.

over, knit 2 together, over, knit 2 together, over, knit 2 together, over; repeat from *. At the end

2d row: Knit 2, purl 4, * purl 8, knit 2, purl 4,

anit 2; repeat from ... 3d row: * knit 9, over, knit 2 together, over. knit 2 togetler, over, knit 2 together, over, knit 1;

repeat from ". At the end knit 6. 4th row: Knit 2, purl 4, * parl 9, knit 2, purl 4.

knit 2: repeat from ".

5th row: "Knit 3, slip 2 stitches on to the pointed needle, knit 2, knit 2 off the pointed needle knit 2, ever, knit 2 tegether, over, knit 2 logether, over, knit 2 together, over, knit 2 together, repeat from . At the end, slip 2 on the pointed pin, kuit 2, knit the 2 on the pointed pin, knit 2. 6th row: Kuit 2, purl 4, * purl 9, knit 2, purl 4,

knit 2 : repeat from . 7th row: "Knit S, knit S together, over, knit 2

together, over, knit 2 together, over, knit 2 together, over; repeat from . Knit the last 6 stitches. Go back and repeat from the second row.

When long enough sew on a fringe or a pretty signing like Rose Bud Pattern, which is worked as

With No. 13 needles and course cotton cast on 21 1st row: Knit 2, purl 2, knit 1, over, knit 1, slip

1, kuit 1, pass the slipped stitch over, purl 1, kuit 2 together, kuit 1, purl 1, kuit 1, slip 1, kuit 1, pass the slipped stitch over, purl 1, knit 2 together, knit 1. over knit 1. 2d row: 1 plain, 3 purl, 1 plain, 2 purl, 1 plain,

2 purl, 1 pists, 4 purl, 2 plain, 1 purl, 1 plain.
3d row: Slip 1, knit 1, purl 2, knit 1, over, knit 1, over, slip 1, knit 1, pass the slipped stitch over, puri 1, knit 2 together, puri 1, slip 1, knit 1, pass slipped stitch, over, purl 1, knit 2 together, over,

knit 1, over, knit 1. 4th row: Slip 1, purl 4, knit 1, purl 1, knit 1. puri 1, kmt 1, purl 5, knit 2, parl 1, knit 1. 5th row: Ship 1, knit 1, purl 2, knit 1, over, knit

S, over, slip 1, knit 2 together, cast the slipped stitch over, purl 1, slip 1, knit 2 together, throw the slipped stitch over, over, knit 3, over, knit 1. 6th row: Siip 1, puri 6, knit 1, puri 7, knit 2,

7th row: Slip 1, knit 1, purl 2, knit 1, over, knit 5, over, slip 1, knit 2 together, pass the slipped Much over, thread forward, knit 5, over, knit 1. 8th row ; koit 1, parl 16, kait 2, purl 1, knit 1.

GERMAN INSERTION.

Readers who remember the beautiful example of German lace printed sometime ago, and afterward

Repeat from the first row.

reproduced in the Woman's Extra No. 59, will be glad to get the following directions for an insertion to match it. They are kindly forwarded by Miss Annie I. Newton, with a charming specimen worked in very fine cotton. Cast on 29 stitches.

1st row: Knit 3, over, narrow, knit 4, narrow, over, knit 3, over, narrow, knit 1, over, narrow, knit 1, narrow, over, knit 1, narrow, over, knit 3, over, narrow, knit 4, narrow, over, knit 3.

2d row: Knit across plain. All the even rows 3d row: Knit 3, over, narrow, knit 3, narrow over, knit 5, over, narrow, knit 1, over, slip 1, narrow, throw over the slipped stitch, over, knit 1,

sarrow, over, knit 5, over, narrow, knit 3, narrow, ever, knit 3. 5th row: Knit 3, over, narrow, knit 2, narrow orer, knit 1, narrow, over, knit 1, over, narrow, knit 1, over, narrow, knit 3, narrow, over, knit 1, nartoy, over, knit 1, over, narrow, knit 1, over, nartov, knit 2, narrow, over, knit 3.

7th row: Knit 3, over, narrow, knit 1, narrow. over, knit 1, narrow, over, knit 3, over, narrow, knit 1, over, narrow, knit 1, narrow, over, knit 1. narrow, over, knit 3, over, narrow, knit 1, over parrow, knit 1, narrow, over, knit 3.

1. narrow, over, knit 5, over, narrow, knit 1, over. slip 1, narrow, throw over the slipped stitch, over. knit 1, narrow, over, knit 5, over, narrow, knit 1. over, narrow twice, over, knit 3. 11th row: Knit 3, over, narrow, knit 1, over, narrow twice, over, knit 4. narrow, over, narrow,

9th row: Knit 3, over, narrow twice, over, knit

row, over, knit 3. 13th row: Knit 3, over, narrow, knit 2, over, narrow, knit 1, over, narrow, knit 1, narrow, over, knit 1, narrow, over, knit 3, over, narrow, knit 1, over, parrow, knit 1, narrow, over, knit 1, narrow, over, knit 2, narrow, over, knit 3.

15th row: Knit 3, over, narrow, knit 3, over, narrow, knit 1, over, slip 1, narrow, throw over the slipped stitch, over, knit 1, narrow, over, knit 5, over, narrow, knit 1, over, slip 1, narrow, throw over the slipped stitch, over, knit 1, narrow, over, knit 3, narrow, over, knit 3.

17th row: Kuit 3, over, narrow, knit 4, over, narrow, knit 3, narrow, over, knit 1, narrow, over, knit 1, over, narrow, knit 1, over, narrow, knit 3, narrow, over, knit 4, narrow, over, knit 3,

19th row: Knit 3, over, parrow, knit 5, over, narrow, knit 1, narrow, over, knit 1, narrow, over, knit 3, over, narrow, knit 1, over, narrow, knit 1, narrow, over, knit 5, narrow, over, knit 3. 21st row: Knit 3, over, narrow, knit 6, over, slip 1, narrow, throw over the slipped stitch, over,

knit 1. narrow, over, knit 5, over, narrow, knit 1, over, slip 1, narrow, throw over the slipped stitch, over, knit 6, narrow, over, knit 3. 23d row: Knit 3, over, narrow, knit 5, narrow, over, knit 1, over, narrow twice, over, knit 4, narrow, over, knit 1, narrow, over, knit 1, over, narrow, knit 5, narrow, over, knit 1, over, nar-24th row: Knit back plain and repeat from the

SCRAP-BAG.

NAMEOW EDGING.—Cast on 5 stitches. 1strow: Knit 1, over, narrow, over twice, knit

2d row : Knit 3, purl 1, knit 3. 3d row: Knit 1, over, narrow, knit 4.

MITTENS.—Mrs. Diana Millspane asks for directors for knitting gentlemen's slik mittens—knit

LITTLE CHILDREN'S HOODS.-C. M. B. wants di-LITTLE CHILDREN'S HOODS.—C. M. B. wants directions for knitting little children's hoods and mittens. She wants to knit a hood for a little girl not quite three years old. Several examples have already been given, and the Department will try to furnish fresh ones. Meantine a general sriicle on crochet hoods will probably appear next week.

The Bell Gauge.—We don't know where corre-

The BELL GAUGE.—We don't know where correspondents can get this particular form of gauge in this country, but most good hardware steres sell standard wire gauges—some oblong and others curcular. The bell gauge is a standard gauge made in the form of a bell. In using a gauge the needle is tried in the various holes till it exactly fits one of them. The number of the hole shows the size of the needle is

THE KNITTING EXTRA .- The new Knitting Extra THE KNITTING EXTRA.—The new Knitting Extra will certainly be out in a day or two, and order re-ceived for it will be promptly forwarded. It is printed in pamphlet form, statched in paper cover, on good heavy paper. These changes make it neces-sarily more expensive than the former one, and the

CROCHET BALLS.-Mrs. M. S. asks how these are made. There are two or three ways of making them, and directions will be given in an early number which it is hoped will remove Mrs. s's difficulty.

AN ITALIAN GHOST STORY.

From The Athengum.

One day an old priest, who held one of the Marchese's benefices and often asted as chaplain at San Donato, and who seemed to know everything about everybody, told me, among other things relating to the Strozzis of San Donato, that many years ago, in making some internal alterations which required an opening in a very thick wail, the workmen suddenly came upon the skeleton of a man in a standing position, built into the wall. He was dressed in the costume of about 1620-'40, well known from descriptions, and better from the portraits by Van Deck. Sustermans, and other nainters of the time. The dress had partly monlidered away, the skeleton had become a parched-up manney, and only from the well-preserved teeth and light brown hair it could be conjectured that he had died young. On the head was a breathrimmed felt hat, like that in the well-known pictures of King Charles 1, of England. One of the workmen took the hat and wore it till it was worn out. There was no judicial investigation. The old priest said there was a tradition of a lover surprised by a jealous husband, a Strozzi, who had married a Genoese beauty about 200 years ago or more, and who su ideally disappeared, and was never seen or heard of afterward. He cantioned me not to ask the Marchese about it, as he disliked any mention of that part of his family history.

After some fine weather and bleasant excursions there came a day of continual heavy rain, so not belong which the came and only one of the work me to the search the come in the work me to distinute the part of his family history.

of that part of his harmy history.

After some fine weather and pleasant excursions there came a day of continual heavy rain, so not being able to go out of doors we went most of us on a four through the house. We found a number of old pictures resting on the floor and turned to the wall, mostly saints, hadscaues and portraits of little merit and in had condition. One of them was, however, a really good picture, and though damaged and torn and dark with age and neglect, made a great impression on me. It was a full-length portrait, of a beautiful young woman in the picturesque dress of the seventeenth century, and from what could be distinguished of the figure, the fine features, and the singularity bright and expressive eyes, reminded me instantly of a charming portrait by Van Dyck in a Dornazzo palace at Genoa. Round the fair graceful neck was a very thin sitk or platted hair chair, supsingularly of a charming portrait by Van Dyck in a Dirazzo palace at Genoa. Round the fair graceful neck was a very thin sik or platted hair chain, supporting a very small medallion of a reddish color. The name of the lady denoted, the date, and the name of the painter had been carefully and thoroughly crased. When I called the Marchese's attention to it, te looked at it with an embarrassed air, remarked that it was probably a fancy portrait of some stranger, and immediately turned it to the wall. In a moment after he opened a cupboard full of books, and kindly told me that, as I had a liking for old books, I might examine them, and take those which I thought worth taking.

The operation of glancing at the title-pages, selecting, and carrying the books in packets from the immber-room to my bed-room occupied more than an hour. I then scated myself on the floor, with a couple of candles and my books, and proceeded

immber-room to my bed-room occupied more than an hour. I then scatted myself on the floor, with a couple of candles and my books, and proceeded with my inspection. I was surprised by a very slight sound as of rustling silk, and, locking up from my books, I distinctly saw a female figure in a white dress slowly gliding round the room, feeling the wall with her hands, as if scarching for some particular spot. My first impression was that it was a trick to try my nerves, invented by some one of the guests. As usual, I and locked the door. All this flashed through my mind in an instant. Then, I confess it, there came over me that peculiar sensation called creeping of the flesh—"arrectæque horrore come, et vox faucibus hæsir." I felt my hair standing on end, and my voice stack in my throat. I tried to speak, and could not. At last I moved. At that moment the figure turned toward me, and I saw at once the image of the portrait in the old room; the same white figured silk dress, the same lace, the medallion, the brown hair, and the strange beight eyes with a feverish and melancholy expression. I started to my feet, and in so doing overturned and extinguished the candies. I had not closed either the outer or inner shutters; there was no moon, but a very dim twilight, partly. I suppose, from the stars. Unluckly I had no matches to strike a light. There was the figure, which appeared to move in a light of its own—a sort of halo, as it seemed to me. Slowly it left the wall and disappeared in the bed—a great bed of the sevenieenth century, with a carved walnut-wood canopy and red damask silk handings, of the size and form of a bed appeared in the bed—a great bed of the seventeenth century, with a carved walnut-wood canepy and red damask silk hangings, of the size and form of a bed. I have at the villa of Majano, except that mine is more modern, being of the last century, and having the canepy of carved wood grit and the hangings of ligured blue silk.

I remained for a time, I know not how long, standing bewildered in the middle of the room.

the canopy of carved wood git and the hangings of ligured blue silk.

I remained for a time, I know not how long, standing bewildered in the middle of the room, straming my eyes toward the bed. The semi-darkness and the silence became oppressive; I felt stapplied—an irresistible fascination fixed my thoughts. I undressed hurriedly and almost unconsciously climbed into the bed. I must have failen into a trance or a deep sleep—so deep that I was only wakened by a loud knocking at my door. I jumped out of bed. It was late—so late that breakfast was ready; so the servant told me, and he had been sint by the Marchese to see if I was ill or had gone out. As I was dressing I saw something on the floor; it was a little medalition, a garnet or very red amethyst, or a carbuncle or a ruby, I cannot say positively which—with an exquisite ancheut Greek engiaving of a spaint, with a very thin gold setting and a very small chain, either of silk or plaited hair, with a tiny gold clasp. I send you an impression of it. When I appeared in the breakfast-room every one looked at me with a peculiar expression—at least I thought so—especially the Marchese, who, however, asked very kindly as to my health, observing that I looked pale and haggard. I thanked him, merely remarking that I had sat up too long over the books, and had not been able to sleep till early in the morning. I put into his hand the medallion, telling him where I had found it. He looked at it curiously and nervously, turning very pale. He gave it back to me, saying that it had probably falien out of one of the books; that as he had given me the books, he begged me to accept the medallion also, and to keep it carefully as a slight remembrance of my visit to San Donato. Shortly after breakfast the party broke up, as had been previously arranged, and I returned to

SCIENCE FOR THE PEOPLE.

HOW MINERAL DEPOSITS ARE FORMED. HOW MINERAL DEPOSITS ARE FORMED.

The metallic solutions which have formed our ore Geposits have been ascribed to two sources. One theory supposes that they have drained highly metalliferous zones deep in the interior of the earth; the other, that they have leached diffused metals from rocks of different kinds comparatively near the surface. The latter view is the one that Professor Newberry favors. However probable such a thing might seem, no evidence of the existence of distinct metallic or metalliferous zones in the interior of the earth has been gathered. On the conknit 1, over, knit 1, over, parrow twice, over, knit 4, narrow, over, narrow, knit 1, over, knit 1, narof the earth has been gathered. On the con-trary, says Professor Newberry, volcanic emissions, which may be supposed to draw from a lower level than water could reach, are not specially rich in metallic matters, and the thermal waters which have by their de-posit filled our mineral veins must have de-

posit filled our mineral venus must have de-rived their metallic salts from a zone not many thousand feet from the surface. The mineral springs, which are now doing a similar work, are but part of a round of cirsimilar work, are but part of a round of cir-culation of surface water, which, falling from the clouds, penetrates the earth to a point where the temperature is such as to drive it back in steam. This, with fluid water under pressure and highly heated, possessing great solvent power, may be forced through vast beds of rock, and these be effectually leached by the process. Should such rocks contain the minutest imaginary quantity of the metals these must inevitably be taken into solution, and thus flow toward or to the surface, to be deposited when, by di-minished temperature and pressure, the solvent power of the mensiruum is diminished. It is evident from these facts that we cannot trace the history of the metals back beyond the Laurentian age. And since we find them diffused in greater or less quantity through the sedimentary rocks of all ages, and also find processes in action which are removing and redepositing them in the form of the ore deposits we mine, it is not necessary to look urther than this for a sufficient theory of their formation.

"SCIENCE AT BREAKFAST."

Under this heading the Editor of Science groups together a great deal of information on the action of tea, coffee and chocolate. The latter, he says, from its large proportion of albumen, is the most nutritive beverage, but at the same time, from its quantity of fat, the most difficult to digest. Its aromatic substances, however, strengthen the digestion. A cup of cowever, strengthen the digestion. A cup of chocolate is an excellent restorative and in-vigorating refreshment even for weak persons, provided their digestive organs are not too delicate. Cardinal Richelien attributed to delicate. Cardinal Richelien attributed to chocolate his health and hilarity during his later years.

Ten and coffee do not afford this advantage Ten and coffee do not afford this advantage.

Albumen in tea leaves, and legumin in coffee berries, are represented in very scanty proportions. The praise of tea and coffee as nutritive substances is, therefore, hardly warranted. Tea and coffee, though of themselves not difficult of digestion, tend to disturb the digration of albuminous substances by precipitating them from their discolved state. Milk therefore, if mixed with tea or coffee, is more difficult of digestion than if taken alone, and coffee alone without cream promotes digestion after dimer by increasing the secretion of the dissolving juices. The volatile oil of coffee and the empyreumatic and aromatic matters of chocolate accelerate the circulation, which, of the other hand, is calmed by tea.

the other hand, is calmed by fea.

Tea and cufies both exerts the activity of the brain and nerves. Tea, it is said, increases the power of digesting the impressions we have received, creates a thorough meditation, and, m spite of the movements of thoughts, permits the attention to be fixed upon a certain subject. On the other hand, if ten is taken in excess, causes an increased irritability of the nerve characterized by sleeplessness, with a general feeling of restlessness and trembling of the limbs. Coffee, also, if taken in excess, pro-duces sleeplessness and many baneful effects very similar to those arising from tea drinking. Coffee, however, produces greater excitement, and a sensation of restlessness and heat ensues. For throwing off this condition fresh air is the best antidote. characterized by sleeplessness, with a general best antidote.

PRESERVING WOOD.

An interesting work has been recently published by Herr Funk, of Cologne, giving the results of a long experience on different German lines as to the duminon of railway sleepers of ordinary or piepared wood. Chloride of zinc, sulphate of couper and creesote are the substances chiefly used to impregnate the wood; corrosive sublimate is also employed, but the high cost forlouis its general use. The subhigh cost forbus its general use. The sub-stance found most suitable is chloride of zinc Considerably cheaper than creasors, it pro-duces equally durable sleepers. Sulphate of copper is being generally accadence, as diffi-cult and costly. The average duration of 831,347 pine sleepers, subjected to various pro-cesses of injection, was 14 years. The dura-bility of oak is increased, by injection, from 13.6 to 19.6 years; pine, from 7.2 to 15; fir, from 5.1 to 9; beech, from 3 to 16.5. It will be seen that while puntagened one has a be seen that while non-prepared cas has gre superiority, the injected pine and beech are more durable. Injection under strong pressure is practised in Germany.

FIGHTING SEWAGE GAS.

A Philadelphia inventor has taken a step for ward in the warfare against sewer gas which promises to be valuable. He has added a mer-cury seal to the ordinary water trap connected enry seal to the ordinary with drain pipes of all kinds. The outlet nipe has a trough around it charged with quick-silver. A cap his snugly over the pipe, and is surrounded by flanges which dip into the mersurrounded by Banges which dip into the mer-cury, and thus form a right seal. The cap is so attached to the water closed or basin that, by lifting the lid, it is drawn into a side chamber and allows free egress of the con ents. By the same movement of shutting down the lid the cap is replaced over the outlet pipe and its cap is replaced over the outlet pipe and its flange submerged in the mercury, while below the mercury seal the ordinary water trap is placed, having an outlet for the ventilating pipe, which can be carried to the chimney flue or roof, as convenient. This a double door is raised against the admission of deleterious gases into the building.

THE ENGLISH-AFRICAN EXPEDITION. A letter recently received in London from a member of one of the Belgian expeditions in Central Africa stated that he had met Mr. Thomson, with the African Exploration Fund's Expedition, on May 18, at a place some ten days' march from Simba's, so that the party had evidently found it necessary to return to had evidently found it necessary to return to the coast by the caravan route to Bagamoyo or Saadani instead of following the original plan of coming out at Kilwa. It is probable, says Nature, that the change of route was caused by civil wars among the native tribes. Mr. Thomson has thus had an opportunity, not contemplated at the outset, of passing through a considerable tract of unknown country between the southeast of Lake Tanganyika and between the southeast of Lake Tanganyika and Inyanyembe, and in so doing he has been able to visit Lake Hikwa and settle its proper posi-tion, which has been a puzzle to geographers for some time. In a map accompanying the account of Mr. H. B. Cotterill's journey with the late Captain Etton northward from the head of Lake Nyassa, this lake is placed with dotted lines in a position which is prob-ably a good deal too much to the south and east of its true locality. The letter above re-ferred to added that Mr. Thomson was in ex-cellent health, and that he claimed to have traversed 2,000 miles of unknown country in the twelve months he had been on the march. to visit Lake Hikwa and settle its proper posithe twelve months he had been on the march. A telegram from the British Consul-General at Zauzibar, dated July 17, announces the safe return of Mr. Thomson and his party.

USE OF WOOLLEN CLOTHING. Professor Jaeger, of Stuttgart, recommends Professor Jacger, of Standard Research the use of woollen clothing both in summer and winter, and has invented a sort of normal dress by which he claims the accumulation of fat and water in the system can be prevented. This normal clothing has two expressions of the system can be prevented. This normal clothing has two expressions of the system can be considered.

among which may be mentioned the various fixed and hydrocarbon oils, chloroform, ether, and carbon-disulphide. Unless, however, the caoutchouc has been masticated or otherwise degenerated, it is doubtful whether a true solution is obtained. When a clear limpid solution is required, one of the best solvents is that proposed by Payen, namely, carbon-disulphide, mixed with 5 per cent of absolute alcohol. It mixed with 5 per cent of absolute meetal. In one part of masticated caoutchout is dissolved in 30 parts of the above solvent, a solution is obtained which can be filtered through paper, and may be employed in covering the most delicate mould with successive layers of

caoutchouc. STEREOTYPE PLATES OF CELLULOID. A new process for obtaining stereotypes for printing has been discovered by M. Emile Jeannin, a sculptor of Paris, who proposes to employ for that purpose the material known as celluloid. The process of preparation takes only half an hour, when the types are once set up, and the plates thus produced are said to be remarkably suitable for washing on cylinder machines running at a produced are said to be remarkably suitable for working on cylinder machines running at a high speed, being light, flexible, and very durable. In this last respect, indeed, it is claimed they surpass metal plates. The length of time for making a plate, other things being equal, will be a great drawback to the success of the new process.

SUN SPOTS AND WEATHER.

Those meteorologists who believe that the Those meteorologists who believe that the weather depends upon the presence or absence of spots on the sun do not get much comfort from Mr. Dalias, of the British Meteorological Office. According to Mr. Dalias, all predictions or assumptions based on the assumed concord between sun spots and the weather in the British Isles are worthless. There is no con-cord whatever, he says—and he adduces facts and figures which certainly appear to bear out the assertion—between the relative number of sun spots and the heat radiated on the British

STOPPING ENGINES BY ELECTRICITY. An improved method of stopping engines, An improved method of stopping engines, says The Electrician, has recently been devised. The main object of the device is to enable any child or unskilled person in any part of a mill to stop the engine in case of accident. The action is exceedingly simple. By touching a spring similar to the spring of an electric bell, the still bell in motion. an electric ball is set in motion. drops and shuts one of the valves, which pre-vents the steam from escaping, and the engine s brought to a standstill.

JAPANESE PAPER AIR-CUSHIONS. Japanese paper air-cushions are said to have some advantages over those made of rubber. They may be rolled into a package of smaller dimensions when not in use; they will not stick together as rubber does after it is wet, and for pillows they are better because they have no odor. Their strength is very great; a man weighing 160 pounds may stand upon one without bursting it. They are said to be water-proof, and to make excellent life-preservers.

THE NEW ARRIVAL. From Fun.

Ma.

A charming little tiddy hidy bit of mother's bliss,
A tiny toddles, sweet as flow'rs of spring:
A precious popsy wopsy—give its mammy, den, a A preity darling itsy witsy ting!

So that's the little fellow! H'm! A healthy-looking chap.

Another mouth to feed, as sure as fate!

To, wife, I don't consider that his coming's a mishap.

But still I could have done with less than eight.

BROTHER.

My eye! Is that the baby! What a jolly little pup!
But I say, ma, wherever is its nose!
And I say, father, by-and-by, when he gets more

grown up, He'll wear my worn-out jackets, I suppose, Unche.
Another † Well, thank goodness, I am not a married What! Don't I think him pretty ? No. I don't. To keep him from the workhouse you must do the best you can; Don't think that I'll assist you—for I won't!

Doctor. How are we getting on to-day? I trust we soo shall mend. We mustn't think we're strong just yet, you know. etter take a something which this afternoon

Pil send. And let me see—hum!—ha!—Ah, yes—just so. He's lovely, that he is, mum! See them sturdy hittle legs!
He's twice the size of Lady Smither's third:
And when he comes a-catting of his little toosey

He'il be a man, he will, upon my word. Nations of the looks hearthy, but you mustn't to that-

1-look, dear, on his face! Is that a rash?

Ma (da capa).

A charming little thidy indy bit of mother's bliss,
A tiny toddles, sweet as flow'rs of sorting;
A precious popsy wopsy-give its mannay, den, a
kiss.
A pretty darling itsy witsy ting!

MUSICAL COMPOSERS AND THEIR HABITS.

From The Girls' own Paper.

Haydn, when he sat down to compose, always dressed himself with the atmost care—bad his hair nicely powdered and put on his best suit. Frederick II, had given him a dramend ring, and Hayon declared that if he happened to begin without it he could not summon a single idea. He could write only on the finest paper, and was as particular in forming his notes as if he had been entraving them on copper plate. After all the se minute preparations he began by choesing the theme of his subject, and fixing into what keys he wished to mediate it; and he, as it were, varied the action of his subject, when he felt fineself in a humor for composing, had his plano carried into a heantiful field, and thus cultivated his imagination. Surti, a man of gloomy imagination, preferred the solemn stillness of a spacious room, dimly lighted by a single lamp. Chairosa d lighted in noise and mirth. Surrounded by a party of friends he composed his operas, and as the ideas presented themselves he seized and embodied them. Paisielle composed his Sachini declared that he never could compose except his two favorite cats were sitting one on each smoulder. From The Girls' Own Paper.

THE ETIQUETTE OF SHOES.

From The London Globe.

The custom of removing boots in Burmah is not so much an article of etiquette observed by equals to equals as an ingenious device to exait the monarch of the Golden Foot and degrade his subjects, and strangers, too, before bim. It is carried further at Mandalay than at any other Asiatic Court. If a European meets the King's palanquin in the streets of the city he is expected to stop then and there and divest himself of his boots. A moment's hesitation to comply with this degrading and uncomfortable custom has often entailed very serious consequences on the foreigner; and our diplomatic difficulties with the Barmese Court have been considerably intensified at different times owing to the insistance of the Lord Chamberlain at Ava or Mandalay that our envoy should take his boots off, and the rejuctance of our proud and diffident representatives to appear in public in their stockings. The British, however, are not by any means the only people whose feelings have been hurt by this unpleasant discourtesy; and Asiatic, as well as European, Ambassadors have been in the most ancent times subjected to the knoonvenience. The first Chinese invasion of Burmah, in the year 1284 A. D., was brought about entirely by the "shee difficulty." The Chinese envoys to the monarch Nam-thee-ha-padé had insisted, in spite of remonstrances, on appearing in the royal presence with their boots on. They ought to have known better; for at Pekin such conduct would have been considered the height of bad manners; and, as far From The London Globe. with their boots on. They ought to have known better; for at Pekin such conduct would have been considered the height of bad manners; and, as far as they were concerned, their infraction of Burmeso etiquette had a very unpleasant ending. They were not allowed twice to insult the Lord of All the White Elephants, but were waylaid in a quiet part of Amarapoora, and had their throats cut, a summary mode of proceeding which brought an army upon Burmah from the Flowery Land.

The habit of removing the outer shoe before en-

tion of fat and water in the system can be prevented. This normal clothing has two exsential properties:

1. It consists exclusively of wool, avoiding all materials woven from plant fibre (cotton or linen).

2. It makes a strong point of keeping warm the middle line of the front of the body.

But the principal peculiarity of the clothing is the excusive use of sheep's wool, even avoiding pocket and other linings of cotton.

INDIA RUBBER SOLVENTS.

Caoutchoug dissolves more or less perfectly, according to its condition, in various liquids.

RELIGIOUS INTELLIGENCE.

FATHER MACKONOCHIE'S VISIT .- the Rev. A H. Mackonochie, the Ritualist rector of St. Alban's, Holborn, has been in this city and in Philadelphia and Baltimore for several weeks, visiting many quarters of the poor, and aiming to attract very little attention. On Sunday last he preached twice in St. Clement's and once in he preached twice in St. Clement's and once in the Church of St. James the Less, Philadeplinia. He is a tall, spare man, with high cheek bones, long face, and deep-set eyes. His delivery is quiet and simple. He speaks without notes, rapidly, and in a low voice, but with great distinctness. There was no reference to Ritualism in his three sermons. His text in the evening was: "And looking up to heaven he sighed and saith nuto him, Ephphatha, that is, be opened." The sermon was a plea to sinners to open their hearts and let spiritual light shine therein, that darkness might be turned into light. The following passages illustrate his light. The following passages illustrate his style: "Our Lord did not come into the world because the world desired it; the world desired nothing less than to come into contact with God. He did not come because the world desired in the world desired nothing less than to come because the world de-God. He did not come because the world deserves it; because the world at that time was sunk to the lowest depths of sin. The world neither desired nor deserved him. Yet he came all the same, because he knew he was needed it the world. . . . Our Lord had uphillwork when he went into Nazareth. He went among people there who had known him when he was a poor low; because who had some him. among people there who had known him when
he was a poor boy; people who had seen him
playing on the streets, and later they had seen
him at work with his carpenter tools. They
said: 'Who is this upstart who comes to
preach among us? Is not this he who was a
carpenter? Ah! he has got tired of his tools
and his work and comes among us to perform
wonders.' Our Lord had another mission—to open the cars and release the tongue.

When we don't get our prayers anawered

When we don't get our prayers answered it is never because God does not hear. To be sure, we may ask Him for a bad thing and He will not grant it. All the same He knows we have asked for it. When we ask Him for a good thing and we do not get it, we must not despair. We must look into our own hearts and see that there is light there. There is an effort necessary in order that the mind of God and the Spirit of Go ! may enter into the heart.' MR. MOODY AT SARATOGA.-Mr. Moody ad-

MR. MOODY AT SARATOGA.—Mr. Moody addressed a large audience at the Town Hail, Saratoga, on August 14, and on Sunday conducted services in the morning at the First Presbyterian Church, in the afternoon at the Gospel Tent, and in the evening at the 1 own Hall and at the Methodist church. Three services were held on Monday and subsequent days. The attendance at these services was very large, the music was exceedingly effective, and the interest in the religious movement very marked. Mr. Moody's method gains simplicity as time goes on. His sermons are shorter and marked. Mr. Moody's method gains simplicity as time goes on. His sermons are shorter and his preaching more direct than formerly. One of his sermons was analyzed in this way: "Jesus Christ—who He is, what He is, and what was His work." Another address was based on four words: "Receive, believe, trust, and take." The following are a few striking passages from his sermons: "If there be intidels or atheists present, I ask them as a tayor to believe that Christ is a Teacher and to pray," O God, if there be a God, teach me," and God will lieve that Christ is a Teacher and to pray, 'O God, if there be a God, teach me,' and God will teach them." . . "He is more than a Teacher, He is a Shepherd, and keeps His sheep. He pities, cares for them, and keeps them from falling. Sometimes He sees a poor mother making an idol of her child, and like the shepherds of Palestine who carry the lambs percess the streams in their bosoms in the shepherds of Palestine who carry the lambs across the streams in their bosoms in order to make the sheep follow. He reaches down and puts the child in His bosom and carries him to the haltops of glory that the mother may again be led in the way." . . "It is one thing to stand in the pulpit and preach, and another thing to go to the people and speak to them in gentleness and tenderness. He held the Christians and the Church responsible for much of shorteeming. There is too much docmuch of shortcoming. There is too much doctrine, which is all good in its place, but if we want to save men we must love them. No man can be a good disciple without love."

"Men wish for monuments, to have a town named after them, or something to keep names in renembrance, but the only work is in mortal is service for Jesus, as the alabaster box of precions ointment which Mary broke upon Him to-day fills the world with fragrance. What a grand place to serve Jesus is this famous and fashionable Saratoga."

OPEN-AIR RELIGION. - Religious services have been held during the week at eight camping grounds in Maryland; Deal's Island, Jackson Grove, Summit Grove, Asbury Grove, Wesley Grove, Woodlawn, Freedom Camp, and Emory Grove, Wooddavn, Freehold Camp, and Emory Grove. There were ever sixty conversions at Summat and twenty-one at Wesley. At the closing service at Summit the company formed in procession and marched around the camp, about thirty children, who have been converted during this meeting, leading in singing, "In the Sweet By and By" and "We are marching to Zion.' Successful union meetings of Methulists and Bantists bave been held Grove, at Martha's Vineyard. The Rev. Di Alvah Hovey, of the Baptist Theological Sem party at Newton, Mass., expressed his pleasure at seeing those who differed from him on some points yet antied with him in loving the divine points yet anited with him in loving the divine Redeemer, and endeavoring to make H is name glorious in the world. Bishop Foster prefaced his remarks in this way: "It would be out of order and out of ha mony with my personal feelings if I did not introduce my speech, designed to be a brief one, with the remark that I am exceedingly pleased to be here. It is not an idle remark; it expresses a sincere feeling of my soul. I am glad to be here with this Christian people." Bishop Foster thea went on to show that believers are all one in Christ, giving as his tenson for it the fact that every true Christian, every emightened Christian who has entered into the life of Christ and knows anything of the truth of Christ, will rejoice in the thing of the truth of Christ, will rejoice in the knowledge and growth and prosperity of every Christian church. The Bishop then spoke of the errors Christians are committing and the effects they will produce, and hoped that a revival might spring up that would spread all through New-England. RELIGIOUS TOLERATION .- The Bishop of

Manchester, Dr. Frazer, recently preached in the Cathedral at Manchester a broad and liberal sermon on the folly and wickedness of bigotry sermon on the folly and wickedness of bigotry and the wisdom and blessedness of toleration. Taking for his text, "Whosoever will save his life shall lose it," he applied the words to churches as well as to individuals. The Bishop said: "I do not believe that any Church ever perished, or ever came to any appreciable harm, by making reasonable concessions in a spirit of tolerance and charity. I can see plainly enough—and so, I imagine, can most men—what are the things that are fatal to churches—an indolent, grasping, or self-seeking clergy; -an indolent, grasping, or self-seeking clergy; neglected parishes; unpunished scandals; fierce intoleranc against those who differ from us, as though they were not worthy of the Christian name; and sometimes 'blunders that are worse than crimes,' such as inability to read the signs of the times; a stationary or even teactionary attitude in an age of progress; a want of sympathy with great popular movements; a duil and obstinate adhesion to principles which are merely customary and have over-lived their era, as though they were vital and eternal. In this way churches have lost their life whilst seeking to secure it. They have thrown away the key of their position in the hearts and affec-tions of the people, while endeavoring to maintain an untenable outpost in some privilege which was a source of weakness rather than of strength to them. God grant that the Church of Eugland may be delivered from this folly." The Rev. Dr. Osborne, of North Adams

Mass, has prepared a history of the Baptist and other denominations of that town. The first church building was of logs, and stood near where the track of the Pirisfield and North Adams Railroad crosses the highway which Adams Railroad crosses the highway which forms the southern boundary of what was known then as the four-mile square, midway between the two settlements of Adams. This was in 1766, when the town lands set apart for the support of feligion were beneficial only to the standing order, or Congregationalists. Ten years later Quakers from Rhode Island became quite proprient projectly-owners, and they quite prominent property-owners, and they built a church in 1781 which is still standing in what is now the town of Adams. It was re-paired ten years ago, but no services are held in it. In 1782, Jeremiat Colgrove gave the land for the site of a church in North Adams. It was but little used until 1794, and was undenominational, there being no church organi-zation. In October, 1808, the local Baptis church took definite shape, the Mert odists organized in 1824, the Congregationalists in 1827, and the Episcopal, Universalist, and Roman Catholic churches subsequently.

The report of the Chapel Committee, read at one of the closing sessions of the Wesleyan Conterence in England, showed that the fund

had felt the effect of bad times, the decrease being nearly \$1,000. During the year 123 new chapels had been built, sixty of which were in places in which no Wesleyan chapet before existed. There had also been ninety six enlargements, and altogether above 30,000 additional sittings had been provided. Twenty school-rooms had been erected and thirteen manses. rooms had been erected and thirteen manses. The total cost of all these erections and enlargements, and of forty-two organs, had been \$1,590,875, and the temporary debt was \$373,035. The report of the Metropolitan Chapel Building Fund recorded that during the year thirteen sites to new chapels had been secured, and negotiations were in progress for

The British Census bill has revived the acttation for a religious enumeration. In view of controversies as to the relative strength of different churches and sects, information of this kind would no doubt be valuable, and the Established Church has always been rather anxious to have such a return made up. The Nonconformists, however, are hostile to the Nonconformists, however, are hostile to the proposal, and persist in declaring that such a census, if made, would be vitiated by crediting most people of "no religion" to the Established Church, while it would cause an amount of irritation which it would not be wise to provoke. Lord Cranbrook recently remarked that there was no greater importance in asking a man to what church he belonged than in asking him whether he were blind, deaf or dumb. blind, deaf or dumb.

A stone from an ancient church in England was presented recently to an Episcopal congregation in Massa-busetts. The stone is inscribed on one side: "St. Margaret's Church, King's Lynn, England, to St. Stephen's Church, Lynn, Mass., U. S. A., 28th June, 1880." It is twenty-four inches in length, ten in these in width, and seven inches in depth, and was part of a window jumb in the old church. It is of nearly the same shade of color as that used in the construction of the new edifice at Lynn. It will be placed in the vestibule of St. Stephen's Church, with a panel surrounding it, and will also contain a brass plate with a fac-simile of the inscription upon it. was presented recently to an Episcopal congrethe inscription upon it.

The anniversary of St. Ignatius Loyola, founder of the Society of Jesus, was celebrated with unwonted spirit early in August at the monastery of Loyola in the frontier province Guipuzcoa, in the north of Spain. More than 50,000 Basque peasants and mariners, and several hurdred aristocratic families from the neighborhood assembled to winess the local fetes, which consisted of dances and builfights, after a morning devoted to High Pontifical fetes, which consisted of dances and outlights, afer a morning devoted to High Pontifical Mass, celebrated by a Cardinal and 120 priests. About 360 Jesuit Fathers were present at their founders' shrine. The convent was restored by Senor Canovas to the Jesuits recently expelled

The United Presbyterian Synod's Committee on Disestablishment in Scotland has adopted resolutions to this effect: That the by-elections ought now to be carefully watched, and the opinions of all candidates ascertained on the question, and candidates favorable to Disestab-habment brought forward; that the claims of Disestablishment ought to be pressed on the attention of members of Parliament by constit-uents; that the policy of assuming an oblig: tion on the present Parliament to postpone Disestablishment to a Parliament of the future is pro-moted in the interests of the Kirk, and is to be firmly resisted.

The Emperor of Germany is reported to have stated very decidedly that he would not attend the festival of the completion of the Cologne Cathedral unless the ecclesiastical superior were present. As Dr. Melchers has been legally deposed from the Archbishopric, his presence as the leading figure in the great ceremonial would be taken by the whole Protestant people of Germany as equivalent to the march of their sovereign to Canessa. The Government, and especially Bismarck, is determined that the rebel prelate shall not be recalled to his functions for this purpose, while this is the one point upon which the Centre party is eagerly directing all its forces.

Among the members of the executive committee appointed by the various Methodist bodies to make arrangements for a Methodist bodies to make arrangement's for a Methodist Ecumenical Conference, are Bishop Sampson, Dr. A. C. George, General Clinton B. Fisk, Bishop M'Tyeite, Dr. T. O. Summers, Protessor R. W Jones, Dr. J. H. A. Johnson, the Rev. Charles M. Griften, and the Rev. T. B. Appleget. Delegates have been chosen by the Methodist and Methodist Episcopal Churches of Canada, and also by the Primitive Methodist Canada, and the Evangelical Association.

One of the newest religious newspapers is One of the newest religious newspapers is the Anglo-Israel Eusign, whose energies are devoted to the indentification of the British Nation with the Loss Ten Tribes of Israel, carried away captive into the Assyrian country by Tiglach Pileser and Shalmaneser, about R. C. 721. Other subjects, as far as they bear upon this one, will also receive attention—such as the discoveries in the Great Pyramid of Egypt, the Restoration of Israel and Judah; the Second Advent in its Biblical meaning and the approaching Millennium.

Father Corel recently remarked to a correspondent of The Pall Mail Gazette: "The Couren has need of poverty and misfortane ere she will regain her primitive purity and acquire her former influence over the souls of men. The poor have a religion of their own—a sort of tender superstition of the Madouna. There are still teithful children of the Church among the aristocracy, but these are few and far between The middle classes are drifting fast into athersm. Let no one dream that Italy can be Protestantized."

A private conference of Englishmen interested in the Eglise Catholique Gallicane was held at Lambeta Palace three weeks ago at the invitation of the Archoishop of Canterbury, who presided. It was resolved to give conwho presided. It was resolved to give con-tinued support to the movement, and to issue an appeal for funds both in aid of carrying on the work in Paris and through France, and of providing a building for the reception of the Paris congregation on their being obliged to leave the present church at the close of the year.

The Pope celebrated three weeks ago the The Pope celebrated three weeks ago the anniversary of his encyclical on the Thomistic philosophy by the promulgation of one processing its author patron of all Catholic Universities, Lyceums, and schools. The Pope took this occasion to dwell anew on the learning and virtues of the Angelic Doctor, and to deplote the emancipation of reason authority effected in the sixteenth century. Only two out of the sixty-two Bishops in the

Protestant Episcopal Church are bachelors. These are Bishops Seymour and Williams. Seven are widowers: Bishops Pinkney, Gregg, Bissall, Potter, Wells, Dudley, and Smith; of Bissall, Potter, Wells, Dudley, and Smith; of whom Bishops Dudley and Potter have been

Mr. Moody says there are more than 1,500 sermons in the Sermon on the Mount.

CURRENT RELIGIOUS DISCUSSION.

DEACONESSES IN PROTESTANT CHURCHES.

DEACONESSES IN PROTESTANT CHURCHES.

From the Congregationalist.

There is one wheel in the machinery of a few churches we know which a postor who has once seen its working will be quite unlikely ever again to regard as dispensable. It is a board of deaconesses. These are not female deacons to serve the church at communion or act as examining committee—although they might properly enough perhaps be of great use to the charch in the latter capacity. Their work is three fold; to visit strangers, to keep track of the poor and sick, and to inquire after cases of religious interest. They are immediately responsible to the pastor, meeting him at stated times, and reporting what of importance their work since the last meeting may have developed. They are the pastor's assistants, doing much of his work better than he can, as is readily apparent to any one acquainfed with the details of pastoral work; they are his fingers on the pulse of the congregation, feeling for him the ocat of the church life; they greatly relieve him of one often distressing auxinty lest some one may be sick of in trouble and he ignorant of it.

ADAPTABILLTY OF FAITH.

From The Christian Union. Churches and statements of belief cannot in the Churches and statements of belief cannot in the nature of things be final, but from age to sage must adapt themselves to the expanding spritual knowledge and needs of men; for the spiritual life, like the intellectual life, is progressive; it cannot rest in present attainments, or it ceases to be life. It must go torward through new experiences into new knowledge and power. So long as it does this the language in which it clothes itself to the eye and ear will change from age to age. The true stability and hope of the world are not to be found in its external institutions or in its church organizations, but in its spiritual life trained to obedience to the higher laws of God, which is the significance and end of all true progress.